

Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

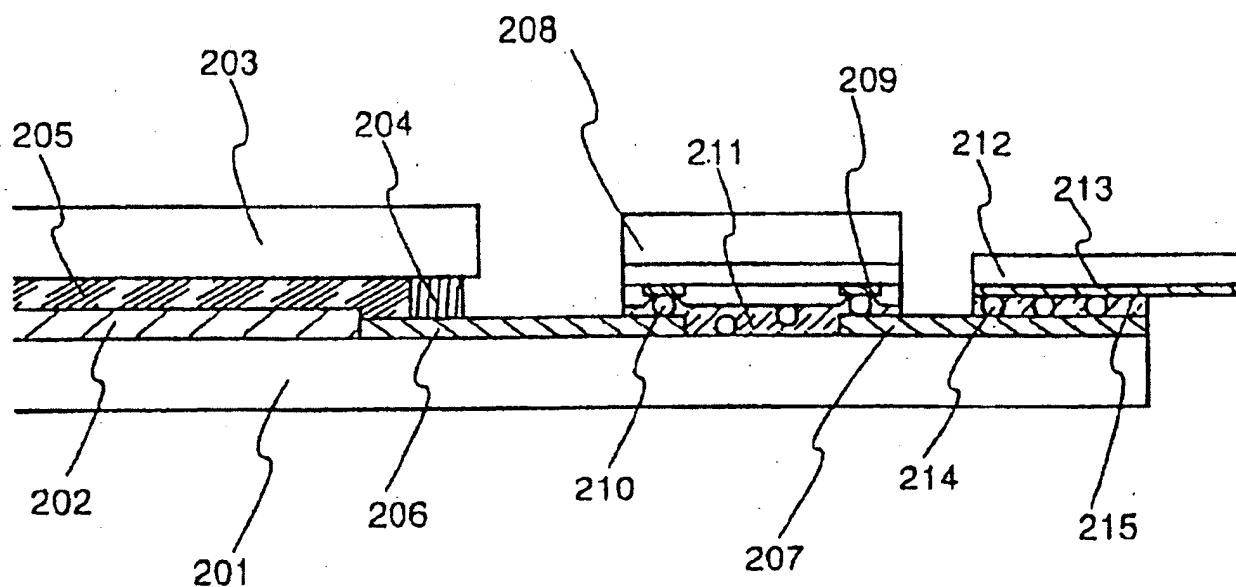
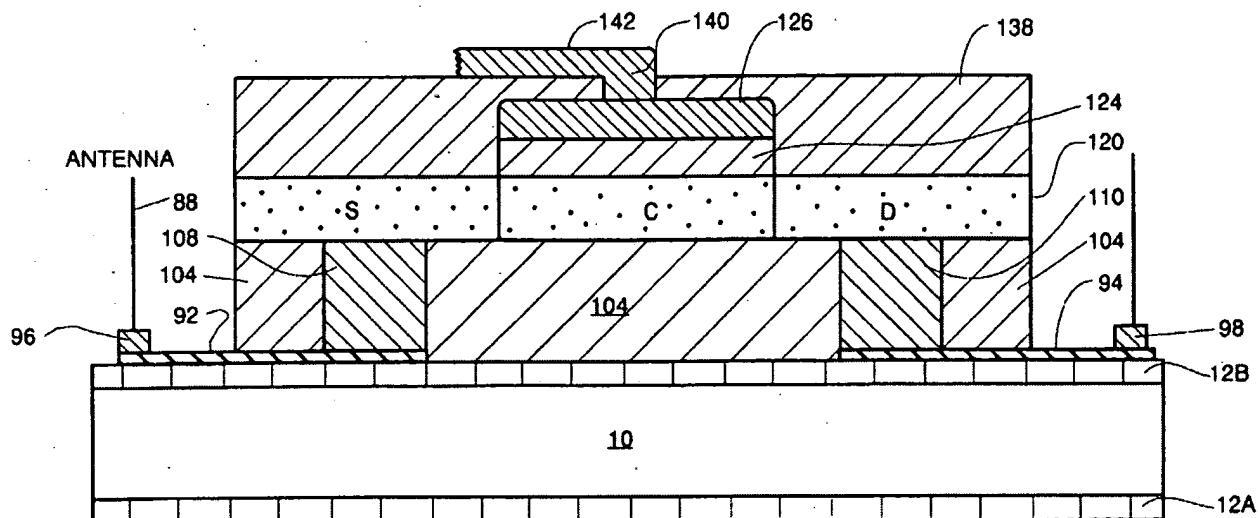
There is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Reddy, Yamazaki '127 and Fujieda or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be modified in the manner asserted in the Official Action, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The Official Action concedes that "Reddy does not disclose an insulating film over the conducting wire, the fine particles of a soft magnetic material are included in the insulating film" (page 2, Paper No. 20090202). The Official Action relies on Yamazaki '127 to allegedly teach "an insulating film (215) and fine particles of a soft material (214; gold) are included in the insulating film" (page 3, Id.; citing Figure 4A and related text). Also, the Official Action relies on Fujieda to allegedly teach "soft magnetic particles (paragraph 105, "Fe"))" (Id., citing Figure 5 and related text). Without any specific references to Reddy, Yamazaki '127 or Fujieda in support and without statements which establish the level of ordinary skill in the art at the time of the present invention, the Official Action asserts the following (Id.):

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Reddy with via 108/110 made of an insulating film and fine particles of a soft material are included in the insulating film, wherein the material is iron, in order to simplify the processing steps of making the device (the vias 108/110 of Reddy are made by filling metal into via holes; replacing the metal with conductive resin of Yamazaki would simplify the processing steps involved, since curing conductive resin is much simpler than depositing metal), and in order to absorb electromagnetic waves (see Fujieda, Title) and to reduce the cost of materials (replacing gold conductive particles with iron conductive particles would obviously result in large reduction in cost), respectively.

When the device of Reddy is modified with "via 108/110 made of an insulating film and fine particles of a soft material are included in the insulating film, wherein the material is iron", it will result in "an insulating film (108 would be that film) over the conducting wire, and fine particles of a soft magnetic material (iron) are included in the insulating film".

That is, the Official Action appears to be proposing that it would have been obvious to replace the preferably aluminum vias 108, 110 of Figure 3 of Reddy (reproduced below) with the anisotropic conductive material 215 made from a resin having preferably gold conductive particles 214 of Figure 4A of Yamazaki '127 (reproduced below).

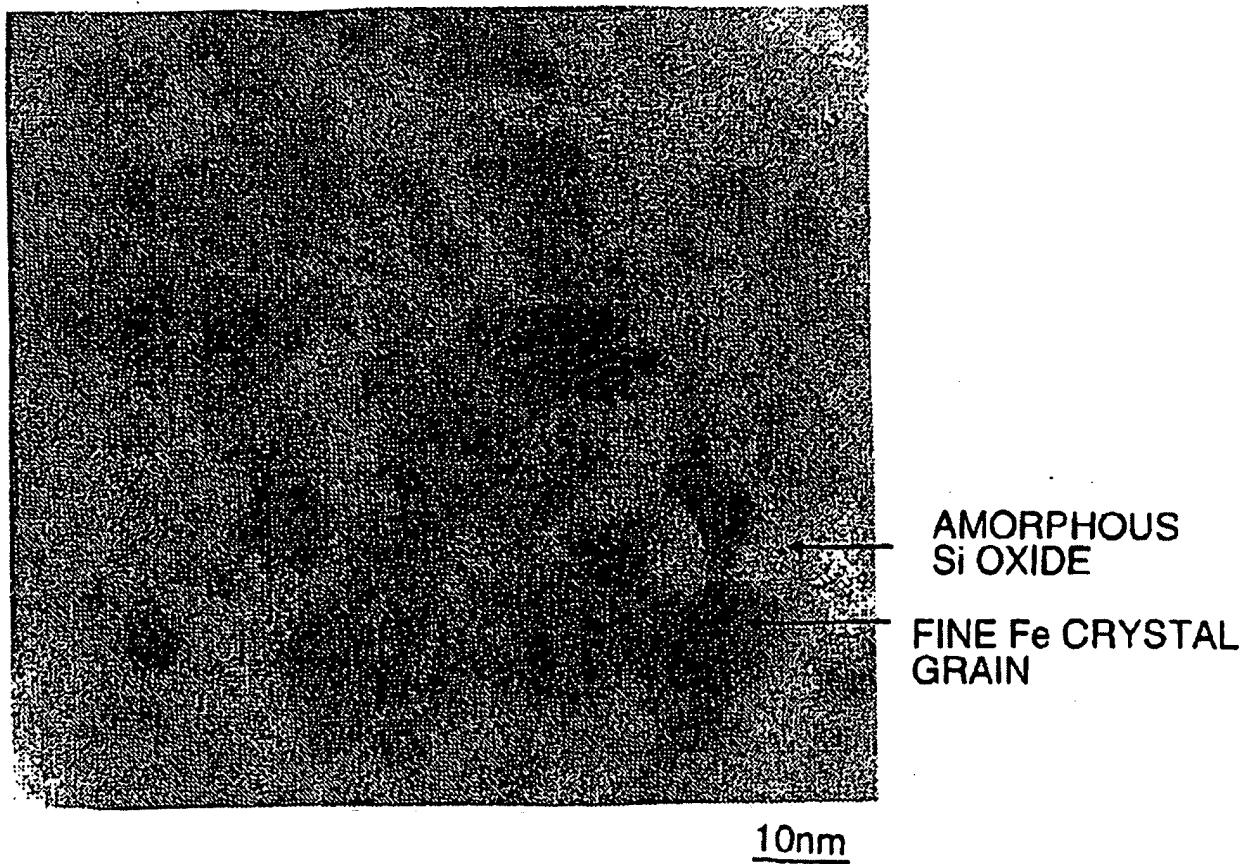


The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

The Applicant respectfully submits that one of ordinary skill in the art at the time of the present invention would not have had sufficient reason to combine Reddy and Yamazaki '127 in the manner proposed in the Official Action. Reddy is directed to an RFID tag or the like and Yamazaki '127 is directed to a liquid crystal display device or

the like, and the device of Yamazaki '127 does not have an antenna. The Official Action has not demonstrated why one of ordinary skill in the art at the time of the present invention who was concerned with an RFID tag would have had any reason to look to the teachings of a liquid crystal display device to modify the RFID tag.

Also, the Official Action appears to be proposing that it would also have been obvious to further modify the gold conductive particles 214 of Yamazaki '127 by instead using the iron particles or crystal grains of Figure 5 and paragraph [0105] of Fujieda (reproduced below) and use this modified material in the vias 108, 110 of Reddy.



The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

The Applicant respectfully submits that one of ordinary skill in the art at the time of the present invention would not have had sufficient reason to combine Reddy as

modified by Yamazaki '127 with Fujieda in the manner proposed in the Official Action. The conductive particle 214 of Yamazaki '127 is used for electrically connecting an input-output terminal 207 and a wiring 213 (see paragraph [0066]). In contrast, the soft magnetic particles of Fujieda are used to absorb electromagnetic waves (see abstract). The Official Action has not demonstrated why one of ordinary skill in the art at the time of the present invention would have had any reason to modify a particle used for electrically connecting a terminal and a wiring with a magnetic particle used to absorb electromagnetic waves or why the electromagnetic wave absorbing function of Fujieda would have been useful or necessary in Reddy and/or Yamazaki '127, much less in the vias 108, 110 of Reddy.

Also, the conductive particle 214 of Yamazaki '217 has a surface plated by a material such as gold, which means the center of the conductive particle 214 is not gold, while the composite magnetic particle of Fujieda appears to have uniform composition considering its function of absorbing electromagnetic waves.

Further, the Official Action appears to propose replacing the metal (preferably aluminum) used to form the vias 108, 110 of Reddy with the anisotropic conductive material of Yamazaki '127. However, the Applicant respectfully submits that an anisotropic conductive material would not be suitable for the vias 108, 110, because the anisotropic conductive material contains a resin, which means the conductivity thereof would be less than that of pure metal.

As such, the numerous modifications proposed by the Examiner appear to destroy the underlying functions of the article being modified. As noted in MPEP § 2143.01, Part V, if a proposed modification renders the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Also, as noted in MPEP § 2143.01, Part VI, if a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not

sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). The Official Action appears to propose at least the following modifications: (1) a conductive particle used for electrically connecting an input-output terminal and a wiring is replaced with soft magnetic particles used to absorb electromagnetic waves; (2) a conductive particle, which normally has a surface plated by a material such as gold, is replaced with a composite magnetic particle, which is intended to have uniform composition; and (3) a metal used to form vias is replaced with an anisotropic conductive material. However, if Reddy were modified in this manner, then it appears that at least the vias 108, 110 of Reddy would be rendered unsatisfactory for their intended purpose. That is, the Examiner's proposed modification or combination of the prior art appears to change the principle of operation of the prior art invention being modified. Therefore, there is no suggestion or motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious.

Therefore, the Applicant respectfully submits that the Official Action has not provided a proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Reddy, Yamazaki '127 and Fujieda or to combine reference teachings to achieve the claimed invention.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness.

Furthermore, the prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claim 1 recites an

insulating film over a conducting wire in an antenna; independent claim 2 recites a resin film over a conducting wire in an antenna; and independent claims 3, 4, 8 and 9 recite an insulating film covering a conducting wire in an antenna. Also, claim 8 recites a second insulating film adjacent to a side of the conducting wire (in the antenna) by interposing the first insulating film therebetween; and claim 9 recites a resin film adjacent to a side of the conducting wire (in the antenna) by interposing the insulating film therebetween. The Applicant respectfully submits that Reddy, Yamazaki '127 and Fujieda, either alone or in combination, do not teach or suggest the above-referenced features of the present invention. Since Reddy, Yamazaki '127 and Fujieda do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,


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